

# Memorandum

**TO:** HONORABLE MAYOR AND  
CITY COUNCIL

**FROM:** Lee Price, MMC  
City Clerk

**SUBJECT:** SEE BELOW

**DATE:** 06-10-09

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**SUBJECT: GREEN BUILDING ORDINANCE FOR NEW PRIVATE SECTOR  
CONSTRUCTION**

## RECOMMENDATION

As referred by the Transportation and Environment Committee on June 1, 2009 and outlined in the attached memo previously submitted to the Transportation and Environment Committee, accept the staff report and consider approval of an ordinance amending Title 17 of the San José Municipal Code to add a new Chapter 17.84 to establish Green Building Regulations for Private Development to include the following:

- (a) Establishing the U.S. Green Building Council's (USGBC), Leadership in Energy and Environmental Design (LEED) and Build it Green's (BIG) Green Point Rated rating systems as the mandatory green building standards for the City of San José.
- (b) Establishing the Green Building Refundable Deposit and procedures for the collection and refund of the deposit.
- (c) Describing the process for requesting an exemption from the established Green Building Standards and pipeline provisions for determining how the standards apply to projects already in progress.
- (d) Listing implementation guidelines to illustrate the application of green building requirements to projects with multiple buildings.
- (e) Analyzing the cost implications resulting from green building requirements in accordance with California Energy Commission requirements.





# Memorandum

**TO:** TRANSPORTATION AND ENVIRONMENT COMMITTEE

**FROM:** Joseph Horwedel

**SUBJECT:** Green Building Ordinance for New Private Sector Construction

**DATE:** May 15, 2009

Approved

Date

5/20/09

**COUNCIL DISTRICT:** City-Wide

## RECOMMENDATION

Recommend that the following be agendized for June 23, 2009, as a separate item for discussion with the full City Council:

Approval of an Ordinance amending Title 17 of the San Jose Municipal Code to add a new Chapter 17.84 to establish Green Building Regulations for Private Development to include the following:

- 1) Establishment of the U.S. Green Building Council's (USGBC), Leadership in Energy and Environmental Design (LEED) and Build it Green's (BIG) Green Point Rated rating systems as the mandatory green building standards for the City of San Jose.
- 2) Establishment of the Green Building Refundable Deposit and procedures for the collection and refund of the deposit.
- 3) Describe the process for requesting an exemption from the established Green Building Standards and pipeline provisions for determining how the standards apply to projects already in progress.
- 4) List implementation guidelines to illustrate the application of green building requirements to projects with multiple buildings.
- 5) An analysis of the cost implications resulting from green building requirements in accordance with California Energy Commission requirements.

Staff will review the Policy's implementation during the Summer of 2011 to evaluate the level of compliance with the Policy and to determine whether changes to the established thresholds and green building standards are needed.

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## **OUTCOME**

The City Council adoption of the Green Building Ordinance for New Private Sector Construction will implement Council Policy 6-32, which establishes green building standards for private development, by codifying the procedures for its implementation and enforcement.

## **BACKGROUND**

On October 7, 2008 the City Council adopted Policy 6-32: the Green Building Policy for New Private Sector Construction (Policy) requiring green building certification in specified private sector development projects and directed staff to draft an ordinance to implement the Policy. The Policy took effect January 1, 2009. The Policy and Draft Ordinance apply to new construction and promote Green Building practices in the design, construction, and maintenance of buildings to minimize the use and waste of energy, water and other resources in the City of San Jose.

The Policy and the proposed Ordinance advance the City's Green Vision Goal No.4 to build or retrofit 50 million square feet of green buildings within the next 15 years, as well as Green Vision Goal 2: reducing per capita energy use by 50%, Goal 3: receive 100% of electrical energy from clean renewable sources, Goal 5: divert 100% of waste from landfills and converting waste to energy and Goal 6: Recycle or beneficially reuse 100% of waste water.

## **ANALYSIS**

This memo addresses the substantive issues related to the Green Building Ordinance for New Private Sector Construction and feedback received from outreach to stakeholders.

### *The Proposed Ordinance*

The proposed ordinance will codify the key provisions of the adopted Council Policy 6-32 including the following:

- Green Building Requirements
- Refundable Green Building Deposit
- Exemptions to the Green Building Requirements
- Implementation Guidelines
- Findings of Cost Effectiveness

### *Green Building Requirements*

The proposed ordinance establishes the U.S. Green Building Council's (USGBC), Leadership in Energy and Environmental Design (LEED) and Build it Green's (BIG) Green Point Rated rating systems as the mandatory green building standards for the City of San Jose. The LEED Green Building Rating System is a voluntary, consensus-based national rating system for developing high-performance, sustainable buildings. LEED addresses all building types and emphasizes five areas: sustainable site development, water savings, energy efficiency, materials and resources selection, and indoor environmental quality.

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The GreenPoint Rating process evaluates building systems, structures, materials and components to assess energy and water efficiency, indoor air quality, resource efficiency of materials and construction methods, and construction quality.

The proposed ordinance imposes mandatory requirements that projects of 10 or more residential units, 25,000 square feet or more of nonresidential space, or high rise development must meet the performance levels as specified in the chart below.

<b>Applicable Project</b>	<b>Green Building Performance Requirements</b>
Commercial / Industrial Tier 1 ( < 25,000 square feet )	Submit a completed LEED Checklist
Commercial / Industrial Tier 2 ( ≥ 25,000 square feet )	Certify at the LEED Silver Level or higher
Residential Tier 1 ( < 10 units )	Submit a completed GreenPoint Rated Checklist or LEED Checklist
Residential Tier 2 ( ≥ 10 units )	Certify as GreenPoint Rated (50 pts) or LEED Certified or higher
High Rise Residential ( 75' or higher )	Certified at the LEED Certified level or higher

*Checklist Requirements*

New construction projects involving fewer than 10 residential units or less than 25,000 square feet of non-residential development are required to submit a green building checklist with their building permit application. Although all projects are encouraged to utilize green building practices, the checklist is for educational purposes only and is meant to familiarize the development community with common green building practices. These applicants are not being required to provide verification on the incorporation of these practices into their project nor will they need to meet any minimum threshold or point level or pay the Green Building Deposit.

*Demonstration of Compliance*

In order to demonstrate compliance, the ordinance requires that verification documents from the USGBC or Build It Green, either a LEED Project Review or GreenPoint Rated Certificate, be submitted to the City in order to document the attainment of the applicable green building standard. In the event the project fails to achieve the applicable green building standards through third party certification, the project can make a request to the Director of Planning, Building, and Code Enforcement to be granted an exception from the green building requirements; otherwise, the project will forfeit the green building deposit described below.

*Refundable Green Building Deposit*

In accordance with the Policy, the ordinance will establish a Green Building Refundable Deposit for the purposes of assuring compliance with the Green Building Policy. The proposed refundable deposit amount is 30 cents per square foot, up to a maximum single deposit of

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\$30,000 per building or shell permit. A shell permit is a building permit for a building constructed without tenant improvements.

The deposit will be required to be paid prior to the issuance of a Building Permit and refunded within a year of project occupancy, upon submittal of the Green Building certification documentation. The deposit proposal is modeled on the existing CDDD program, which collects a refundable deposit based on building square footage which is then returned upon submittal of proof of recycling of 50% of construction debris. The intent of the deposit is to provide an incentive for following through with the formal Green Building Certification process. The deposit rate of \$0.30/square foot is proposed because it is a modest increase above the Construction Demolition Debris Diversion (CDDD) rate of \$0.10-\$0.20 currently applicable to new construction projects.

The deposit amount will vary in relation to the gross square feet being approved through the specific shell or building permit being issued. The refundable deposit is proposed to be collected at the shell permit issuance if no tenant improvements are included. In the event that an occupancy ready building is proposed for construction, the deposit would be collected at building permit issuance.

For residential and non-residential projects involving multiple buildings, it is common that several building or shell permits are issued. For example, if a shell permit is issued, a green building deposit will be paid at shell permit issuance. If an application for tenant improvements for occupancy is later submitted on the same building, a green building deposit will not be paid at that time as it was received at the time of shell permit issuance. In the circumstance of multiple building or shell permits being issued, multiple green building refundable deposits will also be collected. Although no single deposit associated with one shell or complete building permit can exceed \$30,000, the sum of all deposits for a multi-building project could exceed \$30,000 depending on the size of the project and number of buildings or shell permits being issued. For instance, a commercial project with several large buildings would need to pay a green building deposit for each building permit. Although each building permit would not have a green building deposit of more than \$30,000, the sum total of all the deposits for all the buildings in the commercial project could exceed \$30,000.

If a shell permit is issued, the payment of the green building deposit is made at that time so the property owner responsible for the construction of building's shell is responsible for the achievement of the City's adopted green building standards, and not a subsequent tenant of the building making interior improvements to the building, who may not be involved with the early design and construction stages of a building and may not have control over the holistic building infrastructure selected, such as the Heating, Ventilation and Air Conditioning system (HVAC).

#### *Deposit Refund Expiration*

For a project involving one building, the building owner must submit to the City the official LEED or GreenPoint Rated paperwork or exemption request within 1 year after the shell or complete building permit is finalized or deemed inactive. In order to provide flexibility for projects that involve multiple buildings, so that green building certification can be achieved for

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individual buildings or for the entire scope of the project, the building owner has up to 5 years after the shell or complete building permit is finalized or deemed inactive to submit paperwork demonstrating compliance or submit an application for hardship. After the determined expiration date, the project is no longer eligible to receive a refund for the green building deposit.

*Forfeited Green Building Deposits*

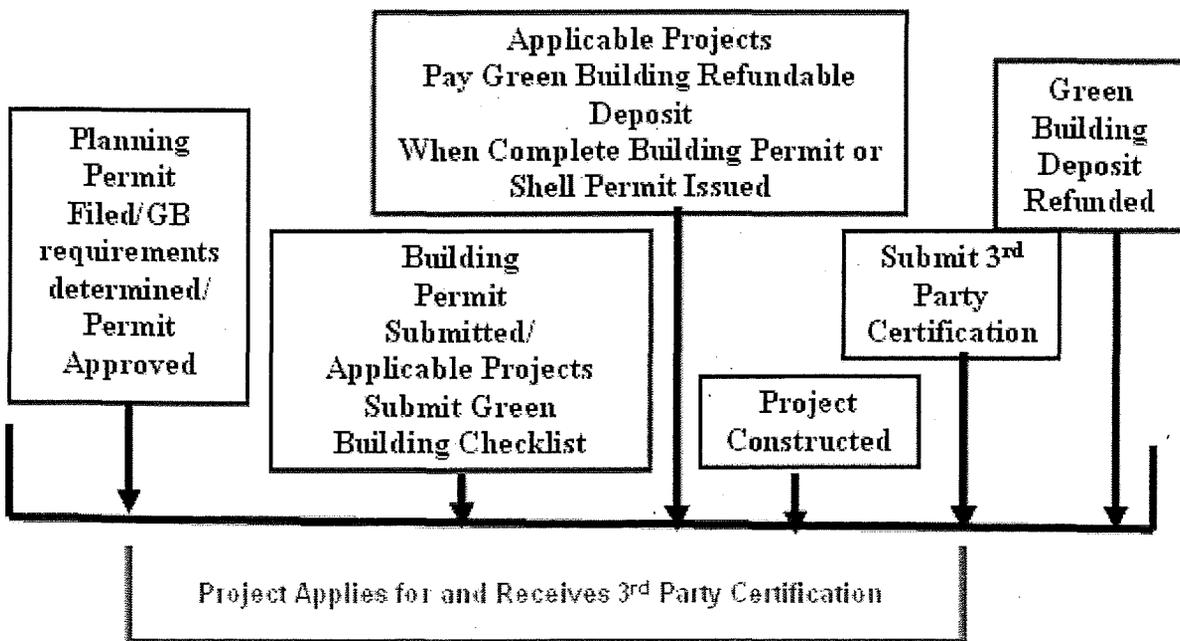
Any green building deposit monies that are forfeited shall be used to support the development and implementation of Green Vision goals including green building and/or the incorporation of green building features in new and existing buildings within the city.

*Affordable Housing projects*

Affordable housing projects receiving funding from the City's Housing Department shall be subject to the green requirements stated in the adopted Policy but not subject to the payment of the Green Building Deposit at the time of Building Permit issuance for all or the portion of the project with affordable units. The Housing Department would be the guarantor of the green building deposit. In the event that an affordable housing project receiving Housing Department funds did not achieve the green building performance standards called out in the Policy, the Housing Department would pay the amount that would have been collected as the green building deposit as a penalty fee. Market rate projects with an affordable component would be subject to payment of the Green Building Deposit.

*Development Process under the Ordinance Provisions*

The table below demonstrates when requirements of the proposed green building ordinance will intersect with the development review and project design and construction process.



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Green building performance standards will be determined early in the development review process at the planning permit stage. This will enable the City to communicate expectations during a project's design phase, so that the incorporation of key green building elements, such as solar orientation, storm water management, and the selection of drought tolerant plants can be addressed at critical points during the development review process.

#### *Pipeline Provisions*

The adopted Policy called out provisions for projects in the pipeline, which were submitted prior to the Policy's effectiveness date on January 1, 2009. The adopted Policy stated that any filed development permits submitted prior to January 1, 2009 would not be subject to the green building requirements until July 1, 2009, at which time any planning development permits, submitted before January 1, 2009 that were not yet approved by the City, would be subject to the green building requirements.

In light of the slowdown in development activity, staff proposes a modification to the adopted Policy's pipeline. Staff proposes to exempt all development permits that were submitted prior to January 1, 2009 from the green building requirements regardless of when the permit receives approval. This would also facilitate clear communications about expectations with applicants so that project requirements which were conveyed to projects by the City upon initial submittal do not change later in the development review process. It is not anticipated that this change to the pipeline provisions will not significantly impact the achievement of San Jose's Green Vision Goal 4 to build or retrofit 50 million square feet of green buildings within the next 15 years.

#### *Request for Exemptions from Green Building Standards*

The green building requirements applicable to a proposed project will be identified as Conditions of Approval in the Planning Development Permit (Site Development, Planned Development, etc.). Upon being notified of the applicable Green Building Standard in the Completeness/Comment (30-day) letter an applicant may request in writing to the Planning Director that a project be exempted from achieving the applicable Green Building Standard. The exemption request must include sufficient information to support a determination that prerequisite points or credits in the LEED Rating System or minimum points required through the GreenPoint Rated rating system can not be achieved because of either the unique type of project or existing physical site constraints. A surcharge to cover staff time to review the request for exemption will be applicable. The Planning Director will take the exemption request into consideration in determining the appropriate green building-related conditions of approval to include in the development permit. These and other permit conditions could be appealed in accordance with the established permit appeal procedures. Subsequent to the approval of a Planning Development Permit, a Permit Amendment, accompanied by a Request for Exemption from Green Building Standards would be submitted in order to eliminate or modify the permit conditions that specify a Green Building Standard.

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## Implementation Scenarios

### *Green Building Performance Standards for Projects with Multiple Buildings*

While the Policy and the table outlining Applicable Projects and associated Green Building Requirement Standards address projects comprised of one building, the Draft Ordinance includes clarification and procedures for applying those requirements to projects with multiple structures..

Applicability of the Policy to multi-building projects will be determined at the Planning Permit stage. Planning staff will determine if the project as a whole will be required to meet the specified Green Building Requirement Standard or identify the specific buildings or building square foot thresholds within the larger project that will be required to meet the Standard.

While the green building standards adopted with the Policy, as shown in a development process table section above, clearly address the green building requirements standards expected for projects that are comprised of one building, the draft ordinance includes procedures for how these requirements would be applied to projects with multiple-buildings.

For multi-building projects, the city will determine at the planning permit stage whether the project as a whole will need to meet the green building requirements specified or whether the individual buildings within the project will need to meet the requirements on a per building basis.

In a multi-building residential project, green building requirements will be based on and applied to the entire project scope for residential development if the individual buildings consist of units with duplicate unit types (models). For instance a townhome project which involves only 3 dwelling units per building but has over 4 buildings with each building having similar layouts, the green building requirements would be based on and applied to the entire project scope of 12 dwelling units. Since 12 dwelling units exceed the 10 unit minimum green building performance thresholds for residential development, the project would be required to achieve LEED Certified or 50 GreenPoint Rated points.

Based on the multi-building green building performance standard criteria detailed above, if individual buildings were to be constructed in a custom fashion in which no duplicate unit typologies exist, the green building performance standards would be based on and applied to the individual buildings, and not the scope of the entire project. For instance if a planning permit was submitted for the subdivision of land to facilitate 15 custom home lots, individual home owners, not a tract home developer, would be responsible to build their particular lot. Although the total number of dwelling units within the scope of the planning permit exceed the green building performance thresholds for the achievement of LEED Certified or 50 GreenPoint Rated points, the construction of all 15 lots would not have units with duplicate unit types and therefore the green building requirements shall based on and applied to each individual single family home. The green building requirements for one individual home requires the submittal of a LEED or GreenPoint checklist by each homeowner prior to the issuance of a building permit.

For a commercial multi-building project, the green building requirements would be based on and apply to the scope of each individual building. For example, the recently constructed commercial center, The Plant, located on the northeast corner of Curter Avenue and Monterey Highway, was submitted under one master planning permit and consists of 32 buildings. The

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total size of the square footage of all the buildings was approximately 640,000 square feet, which exceeds the commercial green building performance size threshold of 25,000 square feet; therefore requiring the achievement of LEED Silver. However, only six buildings of the 32 buildings within the commercial center as individual buildings exceed the size threshold of 25,000 square feet. In reviewing an application for a future new construction commercial center similar to The Plant, the City would determine at the planning development permit stage the extent to which the green building requirements would apply to each individual building. In the example case of The Plant, only the 6 buildings that exceeded the 25,000 square foot threshold would be required to achieve the green building performance standard of Silver and the remaining buildings would be encouraged to achieve the standard and be required to submit the appropriate green building checklist.

### **Cost Effectiveness**

The California Energy Commission requires any local jurisdiction that adopts standards that result in higher energy efficiency levels than required by the State of California's Energy Code (Title 24) provide findings that demonstrate that the jurisdiction's decision to adopt these local standards was based on an understanding of the construction cost-implications for the increased energy efficiency standards. Buildings designed to achieve green building standards of LEED and GreenPoint Rated that were included in the adopted Policy will be ten to fifteen percent more energy efficient than required by Title 24. The Department commissioned a building energy consultant to perform an analysis of the increased costs related to constructing buildings to achieve higher energy efficiency resulting from the green building performance standards. The report made the following findings about the average initial costs of resulting energy upgrades depending on the building type and features included:

The average costs of energy upgrades to achieve the green building performance standards for a single family detached residence, ranges between \$0.57-\$1.35/per square foot. The energy cost savings resulting from the efficiency upgrades allow for a payback of the initial investment within and average of 10.7-20.4 years.

The average costs of energy upgrades to achieve the green building performance standards for a high rise building ranges between \$0.77-\$0.87/per square foot. The energy cost savings resulting from the efficiency upgrades allow for a payback of the initial investment within an average of 5.1-11.1 years.

The average costs of energy upgrades to achieve the green building performance standards for a non-residential midsize building ranges between \$0.52-\$1.44/per square foot. The energy cost savings resulting from the efficiency upgrades allow for a payback of the initial investment within an average of 5.1-10.8 years.

The average costs of energy upgrades to achieve the green building performance standards for a non-residential large building ranges between \$0.74-\$0.82/per square foot. The energy cost savings resulting from the efficiency upgrades allow for a payback of the initial investment within and average of 6.4-9.6 years. The Report is attached, and upon approval of the Ordinance, the Report will be forwarded along with the Ordinance to the California Energy Commission. The Ordinance will become effective September 1, 2009.

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**EVALUATION AND FOLLOW-UP**

This policy addresses primarily Green Vision Goal #4 as well as contributes to implementation of the following Green Vision Goals:

Goal #2: Reduce per capita energy use by 50%

Goal #3: Receive 100 percent of our electrical power from clean renewable sources

Goal #5: Divert 100 percent of the waste from our landfill and convert waste to energy

Goal #6: Recycle or beneficially reuse 100 percent of our wastewater (100 million gallons per day)

A progress report on the implementation of the Private Sector Green Building Policy and corresponding Ordinance to City Council will be provided as part of the annual Green Vision report.

<b>Private Sector Green Building Policy Next Steps</b>	
Implement new construction green building ordinance requirements (Phase I)	September 1, 2009
Outreach begins for Phase II	July 2009
Adoption of amended policy and ordinance to include Phase II	Fall 2010
Implementation of Phase II	January 2011
Evaluation of progress of policy.	Summer 2011

A policy establishing green building standards for retrofit of existing buildings is scheduled for Phase II of the policy, and will include extensive stakeholder outreach prior to proposal of green building requirements.

**PUBLIC OUTREACH/INTEREST**

- Criterion 1:** Requires Council action on the use of public funds equal to \$1 million or greater. **(Required: Website Posting)**
- X **Criterion 2:** Adoption of a new or revised policy that may have implications for public health, safety, quality of life, or financial/economic vitality of the City. **(Required: E-mail and Website Posting)**
- Criterion 3:** Consideration of proposed changes to service delivery, programs, staffing that may have impacts to community services and have been identified by staff, Council or a Community group that requires special outreach. **(Required: E-mail, Website Posting, Community Meetings, Notice in appropriate newspapers)**

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The adoption of a Private Sector New Construction Green Building Ordinance meets Criterion 2. Stakeholder outreach was an integral part of the formation of the draft Ordinance. Staff conducted two rounds of outreach which included two general stakeholder meetings, attendance at standing meetings of the Silicon Valley Chapter of the American Institute of Architects, Santa Clara and San Benito Building and Construction Trades Councils, and attendance at the City's Neighborhood, Developer, and Community Roundtables.

The table below summarizes the stakeholder concerns which have been raised and the resolution of those issues through the draft Ordinance.

Stakeholder Comment	Resolution
<p>Staff received substantial feedback from stakeholders that the requirement for third party certification (using LEED or GreenPoint Rated rating systems) was unnecessary, costly, and time-consuming. There was a request made to develop an alternate path for compliance that could be chosen as an equivalent option to third party certification.</p> <p>The Silicon Valley Chapter of the American Institute of Architects specifically wanted an alternate path of compliance that would enable a licensed architect to verify the project fulfilled the City's Green Building requirements.</p>	<p>The adopted Policy relies on 3<sup>rd</sup> party verification to demonstrate compliance to green building performance standards. The Policy establishes the LEED and GreenPoint Rated rating systems as reference performance standards. Incorporating alternative standards of compliance for typical projects counters the direction provided by the Council through the adoption of the Policy.</p> <p>The 3<sup>rd</sup> party standards and verification were chosen in order to avoid multiple city review cycles, processing time, or inspections, which were concerns raised during outreach on the formation of the Policy. By requiring 3<sup>rd</sup> party verification, all projects are measured against a consistent standard. 3<sup>rd</sup> party verification also reduces the amount of time or fees required for city staff to confirm compliance with the proposed policy and prevents holding up the various phases of development review to demonstrate compliance.</p> <p>The Santa Clara County Cities Association promotes adoption of the LEED and Build It Green's Rating systems as reference standards in lieu of developing City specific standards, which facilitates establishment of consistent standards throughout the County.</p>

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<p>The request was made to allow payment of the green building deposit at the time of certificate of occupancy issuance, rather than at the building permit issuance stage in order to reduce the amount of time developer funds would be tied up for the purpose of demonstrating compliance to green building requirements.</p>	<p>Delaying the green building deposit payment until the issuance of certificate of occupancy is problematic in that the administration becomes substantially more time consuming as the issuance of certificate of occupancy takes place at the project site and not at a city location where payment can be made. Also, no other fees are collected at the issuance of certificate of occupancy. The payment of all other fees and dedications to the City take place at the time of issuance of building permit and are not delayed to the certificate of occupancy.</p>
<p>The green building deposit is considered by some to be too low a rate to serve as a deterrent for noncompliance.</p>	<p>The proposed deposit rate of \$0.30/square foot balances minimizing the burden on the project for receiving additional funds from lenders for financing purposes with the desire to incentivize compliance. There are several factors, including the market, which are pushing development to achieve green building certification. The proposed rate is intended to be low enough so as not to penalize many projects which are already motivated to incorporate green building practices.</p>
<p>Concerns were raised about the refund expiration of the green building deposit. Stakeholders desired ample time to receive green building certification to account for delays resulting from the 3<sup>rd</sup> party certification process.</p>	<p>Staff incorporated generous expiration limits for issuance of the deposit refund. As drafted, the ordinance allows for up to one year after the building permit is finalized to demonstrate compliance to the green building requirements for projects involving one building and up to five years after the building permit is finalized for projects involving multiple buildings.</p> <p>The finalizing of the building permit indicates the completion of construction of the building itself; whereas the issuance of certificate of occupancy indicates that tenant improvements are completed and tenants or residents are able to move in.</p>
<p>Stakeholders desired an appeal process for determinations made by the Director of PBCE on requests for exemptions to green building requirements.</p>	<p>An appeal process has been included in the draft ordinance to allow the project proponent to appeal the Director of PBCE's decision to the Planning Commission.</p>

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<p>Stakeholders requested incentives and not just requirements that would encourage the incorporation of green building techniques.</p>	<p>By requiring development projects to meet either the LEED or BIG standards, many projects become eligible for existing incentive programs such as PG&amp;E's Savings by Design program as well as free multi-family energy-efficiency design assistance, Energy Star grants, and tax exemptions. The policy does not propose any additional incentives for exceeding the policy requirements due to a reduction in staff resources and budget constraints.</p> <p>Existing processes cannot be expedited without additional staff resources or a reduction in public outreach requirements.</p> <p>Staff considered implementing an incentive/penalty program similar to the City of Portland's feebate program. In the City of Portland, new commercial buildings 20,000 feet or larger that merely meet the Oregon state building code are assessed a fee by the City of up to \$3.46/square foot. That fee is waived for buildings achieving LEED Silver certification. Developers constructing buildings that achieve LEED Gold or Platinum, or will receive rebates of \$1.73-\$17.30/square foot depending on the level of certification. Multifamily residential properties of 5,000 square feet or larger would be subject to the same requirements and eligible for rebates of \$0.51-\$5.15/square foot. Implementing a similar feebate system in San Jose is a possibility after there is sufficient evidence to demonstrate the number of projects that would comply with the established green building performance standards. The number of those who do not comply with these criteria is important to anticipate available funds that will be offered as a rebate to those who exceed requirements. In addition, any rebates that could not be funded through the program itself would need to be funded by the City's General Fund, which result in a potential cost burden.</p>
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## POLICY ALTERNATIVES

### *Alternative #1: Direct Staff to Develop an Alternate Path of Compliance for Typical Projects*

**Pros:**

- Will facilitate the measurement of projects based standards that do not require a project to interact with any verification body other than the City and members of the project team.
- Projects would not incur costs of registering with LEED or BIG and completing required inspections and documentation.

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**Cons:**

- Implementing a set of green building standards specific only to San José will not allow for the establishment of regionally consistent standards.
- The cost to the project team would be higher than those of the USGBC or BIG, if the city were to provide a set of green building standards unique to San José which includes peer review of documentation and reports necessary to verify the achievement of green building standards.
- Demonstrating compliance with of green building standards specific to San José will be potentially more time consuming endeavor for project applicants as it would require that they familiarize themselves with unique standards only applicable in San José. To promote regional consistency, the Santa Clara County Cities Association has promoted adoption of the LEED and GreenPoint Rated rating systems. The LEED and GreenPoint Rated rating systems are widely used and acknowledged within the Bay Area and national development communities.

**Reason for not recommending:**

The adopted Policy relies on 3<sup>rd</sup> party verification for typical projects. Developing an alternate path for compliance for typical projects would equate to developing a set of criteria unique to San Jose. The development of such a green building rating system would result in lengthier and more costly in-City process for verification of these.

***Alternative #2: Green Building Deposit to be Payable at the Certificate of Occupancy Stage if Tenant Improvements are Included in Scope of Work.***

**Pros:**

- Delaying the payment of the green building deposit from the time of issuance of building permits to the time of issuance of certificate of occupancy reduces the amount of time a project will need to forgo the additional costs related to carrying the cost of the deposit.
- The building permit issuance occurs prior to the construction of the building; whereas the certificate of occupancy issuance occurs post-construction, after tenant improvements have been installed, typically saving several months of carrying costs for the deposit.

**Cons:**

- All city fees, such as CDDD, school, and parkland fees are typically received at the issuance of the building permit. Should the green building deposit be paid at the certificate of occupancy stage, there will be a greater need for coordination with inspectors who issue the certificate of occupancy in the field. The elevated need for coordination may also result in the delay of the issuance of certificates of occupancy, which is typically considered to be a point in the development review process requiring prompt response.

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**Reason for not recommending:**

Delaying the payment of the green building deposit to the certificate of occupancy stage does not align with the point of payment of any other city fees collected in the development review process. In addition, enormous pressure is generally placed on the Building Division staff to release buildings for final occupancy, and payment of a deposit at this stage would delay issuance of the certificate of occupancy. To minimize the time and resources invested in the city's administration of the green building deposit payment and maintain consistent timing with collection of other city fees, staff recommends requiring the deposit be paid at the point of building permit issuance.

**COORDINATION**

This memo has been coordinated with the Department of Environmental Services, and the Office of the City Manager and the City Attorney.

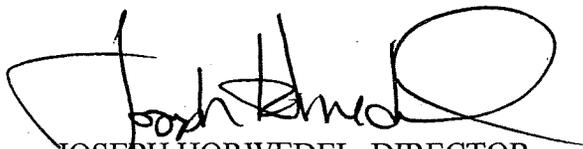
**FISCAL/POLICY ALIGNMENT**

As discussed in the background section, the proposed ordinance is consistent with, and supports activities that comply with the City's adopted Green Vision.

**CEQA**

The adoption of the proposed ordinance is categorically exempt from the provisions of the California Environmental Quality Act (CEQA) per Section 15308 of the CEQA guidelines.

The increased development cost to comply with the ordinance is not expected to displace development to other areas in the South Bay due to increasing attention to green building among other neighboring cities. For example, the Santa Clara County Cities Association is making green building recommendations for all member cities in Santa Clara County and other jurisdictions have adopted or are considering similar green building requirements. Additionally, green building standards will be mandated at the state level by 2011. It is unlikely that development will move substantially within the region or state, or out of state, to seek regulatory or market conditions with reduced green building requirements.



JOSEPH HORWEDEL, DIRECTOR  
Planning, Building and Code Enforcement

For questions please contact Richard Buikema, Senior Planner, at 535-7835.

Attachments

# DRAFT

## San Jose Green Building Ordinance Energy Cost-Effectiveness Study

April 27, 2009

Report prepared for:

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## **1.0 Executive Summary**

Gabel Associates has researched and reviewed the feasibility and energy cost-effectiveness of building permit applicants exceeding the 2008 Building Energy Efficiency Standards to meet the minimum energy-efficiency requirements of the City of San Jose Council Policy (#6-32) regarding local green building standards for private sector new construction. The San Jose ordinance states that new construction meet the overall requirements summarized below:

<b>Applicable Project (San Jose Categories)</b>	<b>Effective Date: August 1, 2009</b>
<b>Commercial/Industrial – Tier 1</b>	<b>&lt; 25,000 sf = LEED-NC Checklist</b>
<b>Commercial/Industrial – Tier 2</b>	<b>= or &gt; 25,000 sf = LEED-NC Silver</b>
<b>Residential &lt; 10 Units – Tier 1</b>	<b>&lt; 10 Units = GreenPoint or LEED Checklist</b>
<b>Residential = or &gt; 10 Units – Tier 2</b>	<b>= or &gt; 10 Units = GreenPoint Rated 50 points or LEED Certified</b>
<b>High Rise Residential (75' or higher)</b>	<b>LEED Certified</b>

The study contained in this report shall be included in San Jose's application to the California Energy Commission. The application to the Energy Commission must meet the requirements specified in Section 10-106 of the California Code of Regulations, Title 24, Part 1, **LOCALLY ADOPTED ENERGY STANDARDS**. The proposed Green Building Ordinance shall be enforceable after the Commission has reviewed and approved the local energy standards as meeting all requirements of Section 10-106; and the Ordinance has been filed with the Building Standards Commission.

Please note that this cost-effectiveness study has been completed with respect to the 2008 Building Energy Efficiency Standards which are scheduled to take effect on August 1, 2009.

## **2.0 Impacts of the New Ordinance**

The energy performance impacts of the Ordinance have been evaluated using several case studies which collectively reflect a broad range of building types.

- Single family house: 1-story 1,705 sf
- Single family house: 2-story 2,682 sf
- Single family house: 2-story 5,074 sf
- High-rise residential: 4-story 36,800 sf, 40 dwelling units
- High-rise residential: 10-story 158,700 sf, 120 dwelling units
- Nonresidential: 3-story 31,740 sf, office building
- Nonresidential: 10-story 115,000 sf, retail/office building

The methodology used in the case studies is based on the way that real buildings are designed and evaluated to meet or exceed the energy standards.

- (a) Each prototype building design is tested for compliance with the 2008 Standards, and all energy measures are adjusted with common construction options to just barely meet the Standards. The energy measures chosen are a combination of measures which reflects how designers, builders and developers are likely to achieve a specified level of performance.
- (b) Starting with a 2008 Standards minimally compliant set of measures, various items are changed to just reach the minimum energy performance required by the Ordinance (e.g, 15% better than 2008 Title 24). In this study, the design choices are based on many years of experience with architects, mechanical engineers and builders and general knowledge of the relative incremental costs of most measures. The intent of this approach is for the study to reflect how building energy performance is actually studied and used to select final energy measures.
- (c) A minimum and maximum range of incremental costs of added energy measures is established by a variety of research means. A construction cost estimator, Building Advisory LLC, was contracted to conduct research and surveys to obtain accurate and current measure cost information. Site energy in KWh and Therms, is calculated for each run to establish the annual energy savings, energy cost savings and CO<sub>2</sub>-equivalent reductions in greenhouse gases.

## 2.1 Single Family House

Energy design descriptions of the single family building prototypes which just meet the 2008 Title 24 Building Energy Efficiency Standards:

### Single Family House: 1,705 square feet, 1-story, 16.3% glazing/floor area ratio – Option A

Energy Efficiency Measures
R-38 Roof w/ Radiant Barrier
R-13 Walls
R-0 Slab on Grade
Low E2 Vinyl Windows, U=0.36, SHGC=0.30
Furnace: 80% AFUE
Air Conditioner: 13 SEER
R-6 Attic Ducts
Reduced Duct Leakage/Testing (HERS)
50 Gallon Gas Water Heater: EF=0.60

### Single Family House: 1,705 square feet, 1-story, 16.3% glazing/floor area ratio – Option B

Energy Efficiency Measures
R-38 Roof w/ Radiant Barrier
R-13 Walls
R-0 Slab on Grade
Low E2 Vinyl Windows, U=0.36, SHGC=0.30
Furnace: 80% AFUE
Air Conditioning: None
R-6 Attic Ducts
Reduced Duct Leakage/Testing (HERS)
50 Gallon Gas Water Heater: EF=0.60

### Single Family House: 2,682 square feet, 2-story, 21.1% glazing/floor area ratio – Option A

Energy Efficiency Measures
R-38 Roof w/ Radiant Barrier
R-15 Walls
R-19 Raised Floor
Low E2 Vinyl Windows, U=0.36, SHGC=0.30
Furnace: 80% AFUE
Air Conditioner: 13 SEER
R-8 Attic Ducts
50 Gallon Gas Water Heaters: EF=0.60

**Single Family House: 2,682 square feet, 2-story, 21.1% glazing/floor area ratio  
– Option B**

<b>Energy Efficiency Measures</b>
R-38 Roof w/ Radiant Barrier
R-15 Walls
R-19 Raised Floor
Low E2 Vinyl Windows, U=0.36, SHGC=0.30
Furnace: 80% AFUE
Air Conditioner: None
R-8 Attic Ducts
50 Gallon Gas Water Heaters: EF=0.60

**Single Family House: 5,074 square feet, 2-story, 22.7% glazing/floor area ratio  
– Option A**

<b>Energy Efficiency Measures</b>
R-38 Roof w/ Radiant Barrier
R-13 Walls
R-19 Raised Floor
Housewrap
Low E2 Vinyl Windows, U=0.36, SHGC=0.30
(2) Furnaces: 80% AFUE
(2) Air Conditioners: 13 SEER
(2) Air Conditioners: TXV + Refrig. Charge (HERS)
R-6 Attic Ducts
Reduced Duct Leakage/Testing (HERS)
(2) 50 Gallon Gas Water Heaters: EF=0.62
Pipe Insulation

**Single Family House: 5,074 square feet, 2-story, 22.7% glazing/floor area ratio  
– Option B**

<b>Energy Efficiency Measures</b>
R-38 Roof w/ Radiant Barrier
R-13 Walls
R-19 Raised Floor
Housewrap
Low E2 Vinyl Windows, U=0.36, SHGC=0.30
(2) Furnaces: 80% AFUE
(2) Air Conditioners: 13 SEER
(2) Air Conditioners: TXV + Refrig. Charge (HERS)
R-6 Attic Ducts
Reduced Duct Leakage/Testing (HERS)
(2) 50 Gallon Gas Water Heaters: EF=0.62
Pipe Insulation

**Single Family Energy Measures Needed to Meet the City's Ordinance.**

The following energy features have been modified from the Title 24 set of measures so that the house design uses 15% less TDV energy than the corresponding Title 24 base case design per the 2009 GreePoint Rated minimum energy requirement. The incremental first cost to provide that measure in comparison with the equivalent base case measure is listed to the right.

The incremental energy improvements specified above to meet the proposed Ordinance requirements are variables selected by designer, builder or owner. There are a number of considerations in choosing the final mix of energy measures including first cost, aesthetics, maintenance and replacement.

**15% Better Than Title 24 Base Case, Option A**

1705 sf

Energy Efficiency Measures	Change Type	Incremental Cost Estimate		
		Min	Max	Avg
R-38 Roof w/ Radiant Barrier	-	\$ -	\$ -	\$ -
R-19 Walls (from R-13): 1,328 sf @ \$0.30 to \$0.40/sf	Upgrade	\$ 398	\$ 531	\$ 465
R-0 Slab on Grade	-	\$ -	\$ -	\$ -
Low E2 Vinyl Windows, U=0.36, SHGC=0.30	-	\$ -	\$ -	\$ -
Furnace: 90% AFUE (from 80% AFUE)	Upgrade	\$ 500	\$ 1,000	\$ 750
Air Conditioner: 13 SEER, 11 EER (HERS)	Upgrade	\$ 25	\$ 75	\$ 50
Air Conditioner: TXV + Refrig. Charge (HERS)	Upgrade	\$ 100	\$ 150	\$ 125
R-8 Attic Ducts	Upgrade	\$ 225	\$ 325	\$ 275
Reduced Duct Leakage/Testing (HERS)	-	\$ -	\$ -	\$ -
50 Gallon Gas Water Heater: EF=0.62 (from EF=0.60)	Upgrade	\$ 100	\$ 200	\$ 150
<b>Total Incremental Cost of Energy Efficiency Measures:</b>		<b>\$ 1,348</b>	<b>\$ 2,281</b>	<b>\$ 1,815</b>
<b>Total Incremental Cost per Square Foot:</b>		<b>\$ 0.79</b>	<b>\$ 1.34</b>	<b>\$ 1.06</b>

**15% Better Than Title 24 Base Case, Option B**

1705 sf

Energy Efficiency Measures	Change Type	Incremental Cost Estimate		
		Min	Max	Avg
R-38 Roof w/ Radiant Barrier	-	\$ -	\$ -	\$ -
R-19 Walls (from R-13): 1,328 sf @ \$0.30 to \$0.40/sf	Upgrade	\$ 398	\$ 531	\$ 465
R-0 Slab on Grade	-	\$ -	\$ -	\$ -
Low E2 Vinyl Windows, U=0.36, SHGC=0.30	-	\$ -	\$ -	\$ -
Furnace: 92% AFUE (from 80% AFUE)	Upgrade	\$ 500	\$ 1,200	\$ 850
Air Conditioning: None	-	\$ -	\$ -	\$ -
R-8 Attic Ducts	Upgrade	\$ 225	\$ 325	\$ 275
Reduced Duct Leakage/Testing (HERS)	-	\$ -	\$ -	\$ -
50 Gallon Gas Water Heater: EF=0.62 (from EF=0.60)	Upgrade	\$ 100	\$ 200	\$ 150
<b>Total Incremental Cost of Energy Efficiency Measures:</b>		<b>\$ 1,223</b>	<b>\$ 2,256</b>	<b>\$ 1,740</b>
<b>Total Incremental Cost per Square Foot:</b>		<b>\$ 0.72</b>	<b>\$ 1.32</b>	<b>\$ 1.02</b>

**15% Better Than Title 24 Base Case, Option A**

2682 sf

Energy Efficiency Measures	Change Type	Incremental Cost Estimate		
		Min	Max	Avg
R-38 Roof w/ Radiant Barrier	-	\$ -	\$ -	\$ -
R-15 Walls	-	\$ -	\$ -	\$ -
R-19 Floor	-	\$ -	\$ -	\$ -
Low E2 Vinyl Windows, U=0.36, SHGC=0.30	-	\$ -	\$ -	\$ -
Furnace: 90% AFUE (from 80% AFUE)	Upgrade	\$ 500	\$ 1,000	\$ 750
Air Conditioner: 13 SEER, 11 EER (HERS)	Upgrade	\$ 25	\$ 75	\$ 50
Air Conditioner: TXV + Refrig. Charge (HERS)	Upgrade	\$ 100	\$ 150	\$ 125
R-8 Attic Ducts	-	\$ -	\$ -	\$ -
Reduced Duct Leakage/Testing (HERS)	Upgrade	\$ 300	\$ 600	\$ 450
50 Gallon Gas Water Heater: EF=0.62 (from EF=0.60)	Upgrade	\$ 100	\$ 200	\$ 150
<b>Total Incremental Cost of Energy Efficiency Measures:</b>		<b>\$ 1,025</b>	<b>\$ 2,025</b>	<b>\$ 1,525</b>
<b>Total Incremental Cost per Square Foot:</b>		<b>\$ 0.38</b>	<b>\$ 0.76</b>	<b>\$ 0.57</b>

**15% Better Than Title 24 Base Case, Option B**

2682 sf

Energy Efficiency Measures	Change Type	Incremental Cost Estimate		
		Min	Max	Avg
R-38 Roof w/ Radiant Barrier	-	\$ -	\$ -	\$ -
R-15 Walls	-	\$ -	\$ -	\$ -
R-19 Floor	-	\$ -	\$ -	\$ -
Low E2 Vinyl Windows, U=0.36, SHGC=0.30	-	\$ -	\$ -	\$ -
Housewrap: 2,137 sf @ \$0.08 to 0.12/sf	Upgrade	\$ 171	\$ 256	\$ 214
Furnace: 90% AFUE (from 80% AFUE)	Upgrade	\$ 500	\$ 1,000	\$ 750
Air Conditioner: None	-	\$ -	\$ -	\$ -
R-8 Attic Ducts	-	\$ -	\$ -	\$ -
Reduced Duct Leakage/Testing (HERS)	Upgrade	\$ 300	\$ 600	\$ 450
50 Gallon Gas Water Heater: EF=0.62 (from EF=0.60)	Upgrade	\$ 100	\$ 200	\$ 150
<b>Total Incremental Cost of Energy Efficiency Measures:</b>		<b>\$ 1,071</b>	<b>\$ 2,056</b>	<b>\$ 1,564</b>
<b>Total Incremental Cost per Square Foot:</b>		<b>\$ 0.40</b>	<b>\$ 0.77</b>	<b>\$ 0.58</b>

**15% Better Than Title 24 Base Case, Option A**

**5074 sf**

Energy Efficiency Measures	Change Type	Incremental Cost Estimate		
		Min	Max	Avg
R-38 Roof w/ Radiant Barrier	-	\$ -	\$ -	\$ -
R-15 Walls (from R-13): 2,590 sf @ \$0.12 to \$0.20/sf	Upgrade	\$ 311	\$ 518	\$ 414
R-30 Raised Floor (from R-19): 3,044 sf @ \$0.10 to \$0.25	Upgrade	\$ 304	\$ 761	\$ 533
Housewrap	-	\$ -	\$ -	\$ -
Super Low E Vinyl Windows, U=0.36, SHGC=0.23, 1151.8 sf @ \$1.40 - \$1.60 / sf	Upgrade	\$ 1,613	\$ 1,843	\$ 1,728
(2) Furnaces: 92% AFUE (from 80% AFUE)	Upgrade	\$ 1,000	\$ 2,400	\$ 1,700
(2) Air Conditioners: 15 SEER, 12 EER (HERS)	Upgrade	\$ 1,000	\$ 3,000	\$ 2,000
(2) Air Conditioners: TXV + Refrig. Charge (HERS)	-	\$ -	\$ -	\$ -
R-8 Attic Ducts	Upgrade	\$ 400	\$ 600	\$ 500
Reduced Duct Leakage/Testing (HERS)	-	\$ -	\$ -	\$ -
(2) 50 Gallon Gas Water Heaters: EF=0.62	-	\$ -	\$ -	\$ -
Pipe Insulation	-	\$ -	\$ -	\$ -
<b>Total Incremental Cost of Energy Efficiency Measures:</b>		<b>\$ 4,628</b>	<b>\$ 9,122</b>	<b>\$ 6,875</b>
<b>Total Incremental Cost per Square Foot:</b>		<b>\$ 0.91</b>	<b>\$ 1.80</b>	<b>\$ 1.35</b>

**15% Better Than Title 24 Base Case, Option B**

**5074 sf**

Energy Efficiency Measures	Change Type	Incremental Cost Estimate		
		Min	Max	Avg
R-38 Roof w/ Radiant Barrier	-	\$ -	\$ -	\$ -
R-19 Walls (from R-13): 2,590 sf @ \$0.30 to \$0.40/sf	Upgrade	\$ 777	\$ 1,036	\$ 907
R-30 Raised Floor (from R-19): 3,044 sf @ \$0.10 to \$0.25	Upgrade	\$ 304	\$ 761	\$ 533
Housewrap	-	\$ -	\$ -	\$ -
Low E2 Vinyl Windows, U=0.36, SHGC=0.30	-	\$ -	\$ -	\$ -
(2) Furnaces: 92% AFUE (from 80% AFUE)	Upgrade	\$ 1,000	\$ 2,400	\$ 1,700
(2) Air Conditioners: 13 SEER, 11 EER (HERS)	Upgrade	\$ 50	\$ 150	\$ 100
(2) Air Conditioners: TXV + Refrig. Charge (HERS)	-	\$ -	\$ -	\$ -
R-8 Attic Ducts	Upgrade	\$ 400	\$ 600	\$ 500
Reduced Duct Leakage/Testing (HERS)	-	\$ -	\$ -	\$ -
(2) 50 Gallon Gas Water Heaters: EF=0.62	-	\$ -	\$ -	\$ -
Pipe Insulation	-	\$ -	\$ -	\$ -
<b>Total Incremental Cost of Energy Efficiency Measures:</b>		<b>\$ 2,531</b>	<b>\$ 4,947</b>	<b>\$ 3,739</b>
<b>Total Incremental Cost per Square Foot:</b>		<b>\$ 0.50</b>	<b>\$ 0.97</b>	<b>\$ 0.74</b>

## 2.2 High-Rise Residential Buildings

Energy design descriptions of the high-rise residential prototypes which just meet the 2008 Title 24 Building Energy Efficiency Standards:

**High-rise Residential: 4-story 36,800 square feet, 40 units,  
Window Wall Ratio = 35.2%**

Energy Efficiency Measures
R-30 Roof
R-19 Metal Stud Walls
R-0 Raised Slab
Low E2 Vinyl Windows, U=0.36, SHGC=0.35
Room PTACs: HSPF=7.2, EER=10.2 (No Ducts)
Central DHW Boiler, AFUE=82.7%

**High-rise Residential: 15-story 158,700 square feet, 120 units,  
Window Wall Ratio = 35.2%**

Energy Efficiency Measures
R-30 Roof
R-19 Metal Stud Walls
R-0 Raised Slab
Low E2 Vinyl Windows, U=0.34, SHGC=0.34
Hydronic HPs w/ Cooling Tower: COP=4.5, EER=13.5
Central Boilers, AFUE=92.2%
Central DHW Boiler, AFUE=80.4%

### **High-rise Residential Energy Measures Needed to Meet the City's Ordinance.**

Incremental energy measures to meet the Ordinance have been evaluated for the above high-rise residential buildings. The following energy features have been modified from the Title 24 measures so that these buildings use at least 10% less TDV energy than the corresponding base case design consistent with the LEED 2009 minimum energy requirements. The incremental first cost to provide that measure in comparison with the equivalent base case measure is listed to the right.

**15% Better Than Title 24 Base Case, Option A**

36800 sf

Energy Efficiency Measures	Change Type	Incremental Cost Estimate		
		Min	Max	Avg
R-30 Cool Roof (Reflectance=0.70, Emittance=0.75); 9,200 sf @ \$0.25 - \$0.40/sf	Upgrade	\$ 2,300	\$ 3,680	\$ 2,990
R-19 Metal Stud Walls	-	\$ -	\$ -	\$ -
R-0 Raised Slab	-	\$ -	\$ -	\$ -
Low E2 Vinyl Windows, U=0.36, SHGC=0.25 6,240 sf @ \$1.40 - \$1.60/sf	Upgrade	\$ 8,736	\$ 9,984	\$ 9,360
Room PTACs: HSPF=7.84, EER=11.2 (No Ducts) units @ \$150 - \$250/unit	Upgrade	\$ 12,000	\$ 20,000	\$ 16,000
Central DHW Boiler, AFUE=82.7%	-	\$ -	\$ -	\$ -
<b>Total Incremental Cost of Energy Efficiency Measures:</b>		<b>\$ 23,036</b>	<b>\$ 33,664</b>	<b>\$ 28,350</b>
<b>Total Incremental Cost per Square Foot:</b>		<b>\$ 0.63</b>	<b>\$ 0.91</b>	<b>\$ 0.77</b>

**15% Better Than Title 24 Base Case, Option B**

36800 sf

Energy Efficiency Measures	Change Type	Incremental Cost Estimate		
		Min	Max	Avg
R-30 Roof	-	\$ -	\$ -	\$ -
R-19 Metal Stud Walls	-	\$ -	\$ -	\$ -
R-0 Raised Slab	-	\$ -	\$ -	\$ -
Low E2 Vinyl Windows, U=0.36, SHGC=0.25 6,240 sf @ \$1.40 - \$1.60/sf	Upgrade	\$ 8,736	\$ 9,984	\$ 9,360
Room PTACs: HSPF=7.84, EER=11.2 (No Ducts) units @ \$150 - \$250/unit	Upgrade	\$ 12,000	\$ 20,000	\$ 16,000
Central DHW Boiler, AFUE=94%: 2 @ \$2000 - \$3000 each	Upgrade	\$ 3,000	\$ 6,000	\$ 4,500
<b>Total Incremental Cost of Energy Efficiency Measures:</b>		<b>\$ 23,736</b>	<b>\$ 35,984</b>	<b>\$ 29,860</b>
<b>Total Incremental Cost per Square Foot:</b>		<b>\$ 0.65</b>	<b>\$ 0.98</b>	<b>\$ 0.81</b>

**15% Better Than Title 24 Base Case, Option A**

158700 sf

Energy Efficiency Measures	Change Type	Incremental Cost Estimate		
		Min	Max	Avg
R-30 Roof	-	\$ -	\$ -	\$ -
R-19 + R-5 Metal Walls; 48,798 sf @ \$1.00 - \$1.75/sf	Upgrade	\$ 48,798	\$ 85,397	\$ 67,098
R-6.4 Raised Slab: 2" Spray-On Insulation 10,580 sf @ \$1.75 - \$2.25/sf	Upgrade	\$ 18,515	\$ 23,805	\$ 21,160
Low E2 Vinyl Windows, U=0.34, SHGC=0.24 26,550 sf @ \$1.40 - \$1.60/sf	Upgrade	\$ 37,170	\$ 42,480	\$ 39,825
Hydronic HPs w/ Cooling Tower: COP=4.5, EER=13.5	-	\$ -	\$ -	\$ -
Central Boilers, AFUE=92%	-	\$ -	\$ -	\$ -
Central DHW Boiler, AFUE=80.4%	-	\$ -	\$ -	\$ -
<b>Total Incremental Cost of Energy Efficiency Measures:</b>		<b>\$ 104,483</b>	<b>\$ 151,682</b>	<b>\$ 128,083</b>
<b>Total Incremental Cost per Square Foot:</b>		<b>\$ 0.66</b>	<b>\$ 0.96</b>	<b>\$ 0.81</b>

**15% Better Than Title 24 Base Case, Option B**

158700 sf

Energy Efficiency Measures	Change Type	Incremental Cost Estimate		
		Min	Max	Avg
R-30 Cool Roof (Reflectance=0.70, Emittance=0.75); 10,580 sf @ \$0.25 - \$0.40/sf	Upgrade	\$ 2,645	\$ 4,232	\$ 3,439
R-19 + R-5 Metal Walls; 48,798 sf @ \$1.00 - \$1.75/sf	Upgrade	\$ 48,798	\$ 85,397	\$ 67,098
R-6.4 Raised Slab: 2" Spray-On Insulation 10,580 sf @ \$1.75 - \$2.25/sf	Upgrade	\$ 18,515	\$ 23,805	\$ 21,160
Low E2 Vinyl Windows, U=0.36, SHGC=0.23 26,550 sf @ \$1.40 - \$1.60/sf	Upgrade	\$ 37,170	\$ 42,480	\$ 39,825
Hydronic HPs w/ Cooling Tower: COP=4.5, EER=13.5	-	\$ -	\$ -	\$ -
Central Boilers, AFUE=92.2%	-	\$ -	\$ -	\$ -
Central DHW Boiler, AFUE=94%: 2 @ \$2000 - \$3000 each	Upgrade	\$ 5,000	\$ 8,000	\$ 6,500
<b>Total Incremental Cost of Energy Efficiency Measures:</b>		<b>\$ 112,128</b>	<b>\$ 163,914</b>	<b>\$ 138,021</b>
<b>Total Incremental Cost per Square Foot:</b>		<b>\$ 0.71</b>	<b>\$ 1.03</b>	<b>\$ 0.87</b>

## 2.3 Nonresidential Buildings

Energy design descriptions of the nonresidential building prototypes which just meet the 2008 Title 24 Building Energy Efficiency Standards:

**Nonresidential: 3-story 31,740 square feet, Window Wall Ratio = 28.3%**

Energy Efficiency Measures
R-38 Cool Roof (Reflectance=0.70, Emittance=0.75)
R-19 Metal Stud Walls
Slab-on-Grade 1st Floor
Low E2 Metal Windows, U=0.50, SHGCc=0.38
2-lamp 4' T8: 62w/fixture (standard effic. lamps + ballasts)
18w recessed CFLs
No Occupancy Sensors
Total Installed LPD = 0.86 w/sf; Allowed LPD = 0.85 w/sf
(4) 25-ton Package VAV Units TE=80%, EER=10.4 w/
R-4.2 ducts in conditioned space, Premium fan motors
DHW Boiler, AFUE=82%

**Nonresidential: 10-story 115,000 square feet, Window Wall Ratio = 34.2%**

Energy Efficiency Measures
R-30 Cool Roof
R-19 Metal Stud Walls
Slab-on-Grade 1st Floor
Low E2 Metal Windows, U=0.50, SHGCc=0.54
2-lamp 4' T8: 62w/fixture (standard effic. lamps + ballasts)
26w recessed CFLs
No Occupancy Sensors
Total Installed LPD = 0.878 w/sf; Allowed LPD = 0.85 w/sf
(2) 150 Ton Cooling Tower, (2) 150 Ton Screw Chillers @
0.72 kW/ton
Zonal Fan Coil Units for Heating and Cooling
DHW Boiler, AFUE=82%

### Nonresidential Energy Measures Needed to Meet the City's Ordinance.

Incremental energy measures to meet the Ordinance have been evaluated for the above nonresidential buildings. The following energy features have been modified from the Title 24 measures so that these buildings use at least 10% less TDV energy than the corresponding base case design consistent with the LEED 2009 energy requirements. , The incremental first cost to provide that measure in comparison with the equivalent base case measure is listed to the right.

**10% Better Than Title 24 Base Case, Option A**

31740 sf

Energy Efficiency Measures	Change Type	Incremental Cost Estimate		
		Min	Max	Avg
R-38 Cool Roof (Reflectance=0.70, Emittance=0.75)	-	\$ -	\$ -	\$ -
R-19 Metal Stud Walls	-	\$ -	\$ -	\$ -
Slab-on-Grade 1st Floor	-	\$ -	\$ -	\$ -
Low E2 Metal Windows, U=0.50, SHGCc=0.38	-	\$ -	\$ -	\$ -
2-lamp 4' T8: 58w/fixture (std. lamps + hi-eff. ballasts) 390 fixtures @ \$20.00 - \$30.00/fixture	Upgrade	\$ 7,800	\$ 1,170	\$ 4,485
16 Occupancy Sensors controlling 32 4' T8 fixtures @\$65-\$85 each	Upgrade	\$ 1,040	\$ 1,360	\$ 1,200
18w recessed CFLs	-	\$ -	\$ -	\$ -
<i>Total Installed LPD = 0.794 w/sf; Allowed LPD = 0.85 w/sf</i>	-	\$ -	\$ -	\$ -
(4) 25-ton Package VAV Units TE=80%, EER=11.0 w/ R-4.2 ducts in conditioned space \$8,000 - \$12,000 each	Upgrade	\$ 32,000	\$ 48,000	\$ 40,000
DHW Boiler, AFUE=82%	-	\$ -	\$ -	\$ -
<b>Total Incremental Cost of Energy Efficiency Measures:</b>		<b>\$ 40,840</b>	<b>\$ 50,530</b>	<b>\$ 45,685</b>
<b>Total Incremental Cost per Square Foot:</b>		<b>\$ 1.29</b>	<b>\$ 1.59</b>	<b>\$ 1.44</b>

**10% Better Than Title 24 Base Case, Option B**

31740 sf

Energy Efficiency Measures	Change Type	Incremental Cost Estimate		
		Min	Max	Avg
R-38 Cool Roof (Reflectance=0.70, Emittance=0.75)	-	\$ -	\$ -	\$ -
R-19 Metal Stud Walls	-	\$ -	\$ -	\$ -
Slab-on-Grade 1st Floor	-	\$ -	\$ -	\$ -
Low E2 Metal Windows, U=0.50, SHGCc=0.38	-	\$ -	\$ -	\$ -
2-lamp 4' T8: 50w/fixture hi-eff. lamps + ballasts) 390 fixtures @ \$30.00 - \$40.00/fixture	Upgrade	\$ 11,700	\$ 15,600	\$ 13,650
40 Occupancy Sensors controlling 32 4' T8 fixtures @\$65-\$85 each	Upgrade	\$ 2,600	\$ 3,400	\$ 3,000
18w recessed CFLs	-	\$ -	\$ -	\$ -
<i>Total Installed LPD = 0.676 w/sf; Allowed LPD = 0.85 w/sf</i>	-	\$ -	\$ -	\$ -
(4) 25-ton Package VAV Units TE=80%, EER=10.4 w/ R-4.2 ducts in conditioned space	-	\$ -	\$ -	\$ -
<b>Total Incremental Cost of Energy Efficiency Measures:</b>		<b>\$ 14,300</b>	<b>\$ 19,000</b>	<b>\$ 16,650</b>
<b>Total Incremental Cost per Square Foot:</b>		<b>\$ 0.45</b>	<b>\$ 0.60</b>	<b>\$ 0.52</b>

**10% Better Than Title 24 Base Case, Option C**

31740 sf

Energy Efficiency Measures	Change Type	Incremental Cost Estimate		
		Min	Max	Avg
R-38 Cool Roof (Reflectance=0.70, Emittance=0.75)	-	\$ -	\$ -	\$ -
R-19 Metal Stud Walls	-	\$ -	\$ -	\$ -
Slab-on-Grade 1st Floor	-	\$ -	\$ -	\$ -
Low E2 Metal Windows, U=0.50, SHGC=0.31 5,576 sf @ \$2.00 - \$3.00/sf	Upgrade	\$ 11,152	\$ 16,728	\$ 13,940
2-lamp 4' T8: 50w/fixture hi-eff. lamps + ballasts) 390 fixtures @ \$30.00 - \$40.00/fixture	Upgrade	\$ 11,700	\$ 15,600	\$ 13,650
No Occupancy Sensors	-	\$ -	\$ -	\$ -
18w recessed CFLs	-	\$ -	\$ -	\$ -
<i>Total Installed LPD = 0.714 w/sf; Allowed LPD = 0.85 w/sf</i>	-	\$ -	\$ -	\$ -
(4) 25-ton Package VAV Units TE=80%, EER=10.4 w/ R-4.2 ducts in conditioned space	-	\$ -	\$ -	\$ -
<b>Total Incremental Cost of Energy Efficiency Measures:</b>		<b>\$ 22,852</b>	<b>\$ 32,328</b>	<b>\$ 27,590</b>
<b>Total Incremental Cost per Square Foot:</b>		<b>\$ 0.72</b>	<b>\$ 1.02</b>	<b>\$ 0.87</b>

**10% Better Than Title 24 Base Case, Option A**

115000 sf

Energy Efficiency Measures	Change Type	Incremental Cost Estimate		
		Min	Max	Avg
R-30 Cool Roof	-	\$ -	\$ -	\$ -
R-19 Metal Stud Walls	-	\$ -	\$ -	\$ -
Slab-on-Grade 1st Floor	-	\$ -	\$ -	\$ -
Low E2 Metal Windows, U=0.50, SHGCc=0.38 20,772 sf @ \$1.50 - \$2.50/sf	Upgrade	\$ 31,158	\$ 51,930	\$ 41,544
2-lamp 4' T8: 50w/fixture (hi. eff. lamps + ballasts) 1,260 fixtures @ \$30.00 - \$40.00/fixture	Upgrade	\$ 37,800	\$ 50,400	\$ 44,100
No Occupancy Sensors	-	\$ -	\$ -	\$ -
18w recessed CFLs	-	\$ -	\$ -	\$ -
<i>Total Installed LPD = 0.745 w/sf; Allowed LPD = 0.85 w/sf</i>	-	\$ -	\$ -	\$ -
Zonal Fan Coil Units for Heating and Cooling	-	\$ -	\$ -	\$ -
Central DHW Boiler, AFUE=80.4%	-	\$ -	\$ -	\$ -
<b>Total Incremental Cost of Energy Efficiency Measures:</b>		<b>\$ 68,958</b>	<b>\$ 102,330</b>	<b>\$ 85,644</b>
<b>Total Incremental Cost per Square Foot:</b>		<b>\$ 0.60</b>	<b>\$ 0.89</b>	<b>\$ 0.74</b>

**10% Better Than Title 24 Base Case, Option B**

115000 sf

Energy Efficiency Measures	Change Type	Incremental Cost Estimate		
		Min	Max	Avg
R-30 Cool Roof	-	\$ -	\$ -	\$ -
R-19 Metal Stud Walls	-	\$ -	\$ -	\$ -
Slab-on-Grade 1st Floor	-	\$ -	\$ -	\$ -
Low E2 Metal Windows, U=0.50, SHGCc=0.31 20,772 sf @ \$2.50 - \$3.50/sf	Upgrade	\$ 51,930	\$ 72,702	\$ 62,316
2-lamp 4' T8: 58w/fixture (std. lamps + hi-eff. ballasts) 1,260 fixtures @ \$20.00 - \$30.00/fixture	Upgrade	\$ 25,200	\$ 37,800	\$ 31,500
No Occupancy Sensors	-	\$ -	\$ -	\$ -
18w recessed CFLs	-	\$ -	\$ -	\$ -
<i>Total Installed LPD = 0.833 w/sf; Allowed LPD = 0.85 w/sf</i>	-	\$ -	\$ -	\$ -
Zonal Fan Coil Units for Heating and Cooling	-	\$ -	\$ -	\$ -
Central DHW Boiler, AFUE=80.4%	-	\$ -	\$ -	\$ -
<b>Total Incremental Cost of Energy Efficiency Measures:</b>		<b>\$ 77,130</b>	<b>\$ 110,502</b>	<b>\$ 93,816</b>
<b>Total Incremental Cost per Square Foot:</b>		<b>\$ 0.67</b>	<b>\$ 0.96</b>	<b>\$ 0.82</b>

### **3.0 Cost Effectiveness**

Tables 3-1a through 3-5a in this section, "Summary of Energy Savings from San Jose Energy Measures", are based upon:

- Incremental site electricity (kWh) and natural gas (therms) saved per year as calculated using the state-approved energy compliance software for the 2008 Building Energy Efficiency Standards, EnergyPro Version 5 and Micropas Version 8.
- Average utility rates of \$0.163/kWh for electricity and \$1.30/therm for natural gas in current constant dollars
- The assumption of no change (i.e., no inflation or deflation) of utility rates in constant dollars over time
- The assumption of no increase in summer temperatures, even though recent scientific studies suggest that global climate change will increase temperatures in the Western U.S. which in turn will increase air conditioning energy use

Tables 3-1b through 3-5b, "Summary of Simple Payback for San Jose Energy Measures", include a cost-effectiveness analysis of the Ordinance with respect to each building occupancy type and design; and assumes:

- No external cost of global climate change -- and corresponding value of additional investment in energy efficiency and CO2 reduction -- is included
- The cost of money invested in the incremental cost of energy measures is not included.

#### **3.1 Single Family Houses**

<b>Building Description</b>	<b>Average Incremental First Cost (\$)</b>	<b>Net Incremental Annual Energy Cost Savings (\$)</b>	<b>Simple Payback (years)</b>
1,705 sf (OptA-15%)	\$1,815	\$89	20.4
1,705 sf (OptB-15%)	\$1,740	\$91	19.1
<b>Averages:</b>	<b>\$1,777</b>	<b>\$90</b>	<b>19.8</b>

Annual Reduction in CO2-equivalent: 0.41 lbs./sq.ft.- year

Building Description	Average Incremental First Cost (\$)	Net Incremental Annual Energy Cost Savings (\$)	Simple Payback (years)
2,682 sf (OptA-15%)	\$1,525	\$139	11.0
2,682 sf (OptB-15%)	\$1,564	\$146	10.7
Averages:	\$1,544	\$143	10.8

Annual Reduction in CO2-equivalent: 0.41 lbs./sq.ft.- year

Building Description	Average Incremental First Cost (\$)	Net Incremental Annual Energy Cost Savings (\$)	Simple Payback (years)
5,074 sf (OptA-15%)	\$3,739	\$187	20.0
5,074 sf (OptB-15%)	\$2,517	\$184	13.7
Averages:	\$3,128	\$186	16.8

Annual Reduction in CO2-equivalent: 0.28 lbs./sq.ft.- year

### 3.2 High-rise Residential Buildings

Building Description	Total Incremental First Cost (\$)	Net Incremental Annual Energy Cost Savings (\$)	Simple Payback (years)
31,740 sf (Opt-A -10%)	\$45,685	\$4,215	10.8
31,740 sf (Opt-B -10%)	\$16,650	\$3,262	5.1
31,740 sf (Opt-C -10%)	\$27,590	\$3,498	7.9
Averages:	\$31,168	\$3,739	8.0

Annual Reduction in CO2-equivalent: 0.32 lbs./sq.ft.- year

Building Description	Average Incremental First Cost (\$)	Net Incremental Annual Energy Cost Savings (\$)	Simple Payback (years)
158,700 sf (Opt-A -15%)	\$128,083	\$11,557	11.1
158,700 sf (Opt-B -15%)	\$138,021	\$14,331	9.6

Annual Reduction in CO2-equivalent: 0.30 lbs./sq.ft.- year

### 3.3 Nonresidential Buildings

Building Description	Total Incremental First Cost (\$)	Net Incremental Annual Energy Cost Savings (\$)	Simple Payback (years)
31,740 sf (Opt-A -10%)	\$45,685	\$4,215	10.8
31,740 sf (Opt-B -10%)	\$16,650	\$3,262	5.1
31,740 sf (Opt-C -10%)	\$27,590	\$3,498	7.9
Averages:	\$31,168	\$3,739	8.0

Annual Reduction in CO2-equivalent: 0.44 lbs./sq.ft.- year

Building Description	Total Incremental First Cost (\$)	Net Incremental Annual Energy Cost Savings (\$)	Simple Payback (years)
115,000 sf (Opt-A -10%)	\$85,644	\$13,392	6.4
115,000 sf (Opt-B -10%)	\$93,816	\$9,763	9.6
Averages:	\$89,730	\$11,578	8.0

Annual Reduction in CO2-equivalent: 0.24 lbs./sq.ft.- year

### Conclusions

Regardless of the building design, occupancy profile and number of stories, the incremental improvement in overall annual energy performance of buildings under the San Jose Green Building Ordinance and 2008 Title 24 Building Energy Efficiency Standards is cost-effective. However, each building's specific design, occupancy type and the design choices may allow for a large range of incremental first cost and payback. As is the case in just meeting the requirements of the Title 24 energy standards, a permit applicant complying with the energy requirements of the San Jose Green Building Ordinance should carefully analyze building energy performance to reduce incremental first cost and reduce the payback for the required additional energy measures.

**ORDINANCE NO. \_\_\_\_\_**

**ORDINANCE OF THE CITY COUNCIL OF THE CITY OF SAN JOSÉ AMENDING TITLE 17 OF THE SAN JOSÉ MUNICIPAL CODE TO ADD A NEW CHAPTER 17.84 TO ESTABLISH GREEN BUILDING REGULATIONS FOR PRIVATE DEVELOPMENT**

WHEREAS, in 2001, the City Council of the City of San José first adopted a Green Building Policy (Policy No. 8-13), and in March 2007, City Council amended the Green Building Policy to mandate that City and Agency facilities over 10,000 square feet attain a LEED Silver certification through the U.S. Green Building Council's (USGBC) Leadership in Energy and Environmental Design (LEED) program, and to encourage green building in the private sector; and

WHEREAS, on October 30, 2007, City Council adopted San José's Green Vision, establishing 10 bold goals for the City that serve as a roadmap for reducing the carbon footprint of the City of San José by more than half. Green Vision Goal No. 4 specifically states that over the next 15 years, 50 million square feet of buildings built or retrofitted in the City shall be "green". The City estimates that approximately 2 million square feet of municipal buildings will be certified green buildings by 2022; and

WHEREAS, in April 2008, City Council adopted recommendations from the Santa Clara County Cities Association to recognize Build It Green's (BIG) GreenPoint Rated (GPR) and USGBC's LEED green building rating systems as reference standards for new residential and non-residential construction, and to incorporate the use of a green building checklist for planning applications. City Council adopted these recommendations in order to promote regional consistency, raise awareness of green building practices, and to make progress on Green Vision Goal No. 4; and

WHEREAS, the provisions of California Assembly Bill 32 (Global Warming Solutions Act) require actions on the part of State and local governments to significantly reduce greenhouse gas (GHG) emissions such that statewide GHG emissions in 2020 are lowered to 1990 levels; and

WHEREAS, in recent years, green building design, construction and operational techniques have become increasingly widespread. Many homeowners, businesses and building professionals have voluntarily sought to incorporate green building techniques into their projects. A number of local and national systems have been developed to serve as guides to green building practices. The U.S. Green Building Council, developer of the Leadership in Energy and Environmental Design (LEED™) Green Building Rating Systems and LEED™ Reference Guide, has become a leader in promoting and guiding green building. Also, the New Homes Green Points Calculator and the Multifamily Green Points Project Tool published by Build It Green are useful documents in evaluating residential green building projects; and

WHEREAS, on September 10, 2008, the Planning Commission held a duly noticed public hearing and heard testimony regarding a green building ordinance, and recommended adoption of the green building ordinance to the City Council; and

WHEREAS, on October 7, 2008, the City Council adopted Resolution No. 74624 establishing Council Policy No. 6-32, *Private Sector Green Building Policy*, and directed staff to draft an ordinance amending the San Jose Municipal Code to establish mandatory green building standards for private development; and

WHEREAS, on November 18, 2008, the City Council held a duly noticed public hearing and heard testimony regarding the proposed green building ordinance

WHEREAS, nothing in this ordinance is intended to duplicate, contradict, or enter a field which has been fully occupied by state law, including the California Building Standards Code; and

**NOW, THEREFORE, BE IT ORDAINED BY THE COUNCIL OF THE CITY OF SAN JOSÉ:**

A new Chapter 17.84 (Green Building Regulations for Private Development) of Title 17 (Building and Construction) of the San José Municipal Code is hereby added to read as follows:

**Chapter 17.84  
GREEN BUILDING REGULATIONS  
FOR PRIVATE DEVELOPMENT**

**Part 1  
Findings and Purpose**

**17.84.010 Purpose**

This Chapter is intended to enhance the public health, safety and welfare of San José residents, workers, and visitors by fostering practices in the design, construction, and maintenance of buildings that will minimize the use and waste of energy, water and other resources in the City of San Jose. The green building standards required by this Chapter are intended to advance greenhouse gas reduction and other sustainability strategies outlined in the City's Green Vision. Green building reduces per capita energy use, provides energy from renewable sources, diverts waste from landfills, uses less water and encourages the use of recycled wastewater. Green building also encourages buildings to be located close to public transportation and services and provide amenities that encourage walking and bicycling and therefore offer further potential to achieve a healthy, environmentally sustainable city.

**17.84.020 Findings**

The City Council finds that:

- a. According to the U.S. Department of Energy's Center for Sustainable Development, buildings consume 40% of the world's total energy, 25% of its wood harvest and 16% of its water. The building industry is the nation's largest manufacturing activity, representing more than 50% of the nation's wealth and 13% of its Gross Domestic Product. Energy and material consumption in buildings can contribute significantly to global climate change.

- b. Green building design, construction, and operation can have a significant positive effect on energy and resource efficiency, waste and pollution generation, and the health of a building's occupants over the life of the building. Green building benefits are spread throughout the systems and features of the building. Green buildings may use recycled-content building materials, consume less energy and water, have better indoor air quality, and use less wood fiber than conventional buildings. Construction waste is often recycled and remanufactured into other building products.
- c. The City Environmental Services Department estimates that construction and demolition debris comprises up to 15% of materials from San José disposed in Santa Clara County landfills, and opportunities exist for reducing the generation of this waste.
- d. In recent years, green building design, construction and operational techniques have become increasingly widespread. Many homeowners, businesses, and building professionals have voluntarily sought to incorporate green building techniques into their projects. A number of local and national systems have been developed to serve as guides to green building practices. At the national level, the U.S. Green Building Council, developer of the Leadership in Energy and Environmental Design (LEED™) Commercial Green Building Rating System and LEED™ Reference Guide, has become a leader in promoting and guiding green building. Build It Green, developer of the GreenPoint Rated program, serves a similar function in California.
- e. Requiring certain commercial, residential and City-sponsored projects to incorporate LEED™ green building measures or meet GreenPoint Rating thresholds is necessary and appropriate to achieve the benefits of green building.
- f. California Health and Safety Code Sections 18938 and 17958 provide that the California Building Standards Code establish building standards for all occupancies throughout the state.
- g. California Health and Safety Code Section 18941.5 provide that the City may establish more restrictive building standards if they are reasonably necessary due to local climatic, geological or topographical conditions.
- h. Because the design, restoration, construction, and maintenance of buildings and structures within the City can have a significant impact on the City's environment, greenhouse gas emissions, resource usage, energy efficiency, waste management and the health and productivity of residents, workers and visitors over the life of the building, requiring commercial and residential projects to incorporate green building measures is necessary and appropriate to achieve the public health and welfare benefits of green building.
- i. The provisions of California Assembly Bill 32 (Global Warming Solutions Act) require actions on the part of State and local governments to significantly reduce greenhouse gas (GHG) emissions such that statewide GHG emissions are lowered to 1990 levels in 2020 and 80% below 1990 levels in 2050.

Local government, by itself, cannot fully address all of the challenges posed by climate change and comply with the mandates of AB 32.

Energy efficiency is a key component in reducing GHG emissions, and construction of more energy efficient buildings can help San Jose reduce its share of the GHG emissions that contribute to climate change.

On October 7, 2008, the City Council adopted a policy establishing minimum green building standards for new construction in private residential and nonresidential development projects, Policy No. 6-32.

n. In February 2009 the City hired Gabel Associates, LLC, an expert in the field of building analysis and Energy Code compliance, to assist the City in preparing a study and proposal for local amendments to the 2008 California Energy Code, and said study demonstrated the cost effectiveness of these local amendments.

The study conducted by Gabel Associates, LLC has concluded that the energy efficiency measures contained in this Ordinance are cost-effective. The City Council hereby adopts the conclusions of the study and authorizes its inclusion in an application for consideration by the California Energy Commission in compliance with Public Resources Code 25402.1(h) (2). Upon approval by the California Energy Commission, this Ordinance shall be presented to the City Council for final adoption.

The City will include the Gabel Associates study in an application for consideration by the California Energy Commission in compliance with Public Resources Code 25402.1(h) (2).

Reduction of total and peak energy use as a result of incremental energy efficiency measures required by this Ordinance will have local and regional benefits in the cost-effective reduction of energy costs for building owners, additional available system energy capacity, and a reduction in greenhouse gas emissions.

## **Part 2 Definitions**

### **17.84.100 Definitions**

The definitions set forth in this Part shall govern the application and interpretation of this Chapter.

### **17.84.101 Application**

Application means any application to the City for a development permit.

### **17.84.102 Building**

Building means any structure used for support or shelter of any use or occupancy, as defined in the California Building Standards Code.

### **17.84.103 City**

City means the City of San José.

### **17.84.104 Commercial/Industrial Building**

Commercial/Industrial Building means all non-residential construction including construction of retail space, office space, and other commercial uses, regardless of the zoning scheme at the project's location.

### **17.84.105 GreenPoint Rated, GreenPoints and GreenPoint Checklist**

Greenpoint Rated, Greenpoints and Greenpoints Checklist mean the residential green building rating system and checklist and certification methodology of the non-profit organization Build It Green.

### **17.84.106 Gross Floor Area**

Gross Floor Area means the total enclosed area of all floors of a building measured to the inside face of the exterior walls including halls, stairways, elevator shafts at each floor level, service and mechanical equipment and mechanical equipment rooms and basement or attic areas having a height of more than seven feet, but excluding area used exclusively for vehicle parking or loading.

### **17.84.107 High Rise**

High-Rise means a building that is a minimum of 75 feet in height.

### **17.84.108 High Rise Commercial Project**

High Rise Commercial Project means a High Rise Building used exclusively for commercial purposes.

**17.84.109 High Rise Residential Project**

High-Rise Residential Project means a High Rise building used exclusively for residential purposes.

**17.84.110 Large Commercial/Industrial Building**

Large Commercial Building means a non-residential building having a gross floor area of twenty-five thousand (25,000) square feet or more and is not a high-rise building.

**17.84.111 Large Residential Custom Project**

Large Residential Project means a residential project that has ten (10) or more single family or multi-family dwelling units that do not have duplicate unit types (models) and is not a high-rise building.

**17.84.112 Large Residential Tract Project**

Large Residential Tract Project means a residential project that has ten (10) or more single family or multi-family dwelling units that have duplicate unit types (models) and is not a high-rise building.

**17.84.113 LEED™ and LEED™ Checklist**

LEED™ and LEED™ Checklist mean the Leadership in Energy and Environment Design rating system, certification methodology, and checklist of the United States Green Building Council (USGBC), the nationally accepted benchmark for the design, construction and operation of high performance green buildings.

**17.84.114 Mixed-Use Project**

Mixed-Use Project means a building as defined in Section 20.200.760 of the San José Municipal Code, where the commercial portion of the building includes a gross floor area of twenty-five thousand (25,000) square feet or more conditioned space, or the residential portion of the development includes ten (10) or more dwelling units. If only one portion of the building qualifies under this Chapter, the requirements of the Chapter will only apply to that portion of the building.

**17.84.115 New Construction Project**

New Construction Project means a project of any size that creates one or multiple new structures. The addition of square footage to an existing structure does not constitute a new construction project.

**17.84.116 Small Commercial/Industrial Building**

Small Commercial Project means a project involving construction of a new structure of less than twenty-five thousand (25,000) square feet for non-residential uses , and is not a high-rise building.

**17.84.117 Small Residential Custom Project**

Small Residential Project means a Residential Project that has nine (9) or fewer single family or multi-family dwelling units that do not have duplicate unit or building types (models) and is not a high-rise building and is not one single-family detached residence

**17.84.118 Small Residential Tract Project**

Small Residential Tract Project means a Residential Project that has nine (9) or fewer single family or multi-family dwelling units that have duplicate unit or building types (models) and is not a high-rise building and is not one single-family detached residence

**17.84.119 One Single-Family Detached Residence**

One Single-Family Detached Residence means one stand alone dwelling unit, not attached to other structures.

**Part 3**

**Compliance and Enforcement**

**17.84.200 Applicability**

The provisions of this Chapter shall apply as follows:

- A. All New Construction Large Residential and Large Commercial/Industrial Projects for which a development permit application is first submitted on or after January 1, 2009 shall be subject to the provisions of this Part; with the following exceptions:

Projects determined by the Director of Planning, Building and Code Enforcement that because of either a unique type of project for which Green Building Standards are not applicable or existing physical site constraints, that prohibits the achievement of prerequisite credits required in the LEED rating system or minimum points per category required through the GreenPoint rating system.

- B. Nothing in this section is intended to create any vested right in any project.

**17.84.210 Exemption Based on Unique Circumstances**

- A. If an applicant for a New Construction Project requests an exemption from the requirements of this Chapter prior to the planning development permit approval of the project, the applicant must pay fees for staff time to review the exemption request and include reports necessary to provide adequate information to support the determination that the type of project or the existence of physical site constraints prohibit the achievement of prerequisite credits required in the LEED rating system or minimum points per category required through the GreenPoint rating system to the satisfaction of the Director.

If an applicant for a New Construction Project requests an exemption from the requirements of this Chapter after the planning development permit approval of the project, the applicant must file an amendment to the planning development permit, which originally including green building requirements as conditions of approval, and include reports necessary to provide adequate information to support the determination that the type of project or the existence of physical site constraints prohibit the achievement of prerequisite credits required in the LEED rating system or minimum points per category required through the GreenPoint rating system to the satisfaction of the Director.

- B. In making a determination in response to an exemption application under subsection A above the Director may consider the finding:

If the Director determines that the facts offered in support of an application under subsection A demonstrate that the type of project or the existence of physical site constraints prohibit the achievement of prerequisite credits required in the LEED rating system or minimum points per category required through the GreenPoint rating system to the satisfaction of the Director.

#### **17.84.220 Green Building Compliance Requirements**

- A. No Complete Building or Shell Permit shall be issued for a New Construction Small Commercial Building, Small Residential Custom Project, Large Residential Custom Project or Small Residential Tract Project unless the application for complete building or shell permit for each building or unit type (model) contains a completed Checklist of one of the following: Green Point Rated Checklist, or LEED Checklist.
- B. No Complete Building Permit shall be issued for a One Single Detached Residence New Construction Project unless the application for complete building permit contains a completed Checklist of one of the following:  
Green Point Rated Checklist, LEED Checklist, or City of San Jose designated equivalent checklist.
- C. Large Commercial/Industrial New Construction Buildings must receive the minimum green building certification of LEED Silver.

No Building or Shell Permit shall be issued for a Large Commercial/Industrial New Construction Building unless the the Green Building Refundable Deposit fees are paid by the applicant as specified in this Chapter as evidence that the Project intends to meet the Green Building Certification Requirements as specified in this Chapter.

- D. Certification Requirement for New Construction Large Residential Tract Projects must receive the minimum green building designation of LEED Certification or 50 points through the GreenPoint rating system.

No Building or Shell Permit shall be issued for a New Construction Large Residential Tract Project unless the Project pays the Green Building Refundable Deposit fees as specified in this Chapter as evidence that the Project intends to meet the Green Building Certification Requirements as specified in this Chapter.

- E. High-Rise Residential New Construction Projects must receive the minimum green building new construction designation of LEED Certification.

No Building or Shell Permit shall be issued for a High-Rise Residential New Construction Project unless the Project pays the Green Building Refundable Deposit fees as specified in this Chapter as evidence that the Project intends to meet the Green Building Certification Requirements as specified in this Chapter.

- F. Mixed Use New Construction Projects. The green building requirements for the entire building shall be based on the highest green building criteria applicable to the square footage or number of dwelling units of each use as specified in Sections 17.84.220 A, C, D. No Building or Shell Permit shall be issued for a Mixed Use Construction Project unless either: a green building checklist is submitted if residential and nonresidential uses are each less than 25,000; or the project pays the Green Building Refundable Deposit if any residential or nonresidential component of the building equals or exceeds 9 residential units or 25,000 nonresidential square feet.

#### Green Building Refundable Deposit Rates

- A. For each application for a building permit for new construction of residential buildings applicable to this Chapter, the green building deposit shall be \$0.30 per square foot, subject to the following maximum square footage:  
For new construction of a residential project, the maximum square footage subject to the deposit for a single project shall be 100,000.

- B. For each application for a building permit for new construction of commercial/industrial buildings, the green building deposit shall be \$0.30 per square foot, subject to the following maximum square footage:  
For new construction of commercial/industrial buildings, the maximum square footage subject to the deposit for a single project shall be 100,000.

#### **17.84.300 Use of Green Building Deposit**

Moneys received by the City as green building deposits shall be used only for:

- A. Payment of green building deposit refunds;
- B. Costs of administration of the program established by this Part; or
- C. Cost of programs whose purpose is to facilitate the construction of green buildings or rehab and retrofit of existing buildings in an environmentally sustainable manner;

#### **17.84.301 Green Building Deposit Refund Administration**

- A. The Director or Director's designee may authorize the refund of any green building deposit which was erroneously paid or collected.
- B. The Director or Director's designee may authorize the refund of any green building deposit when the building permit application is withdrawn or cancelled.
- C. The Director or Director's designee may authorize the refund of a green building deposit when green building certification standards contained in section 17.84.220 are achieved and verified by as acceptable by the Director or Director's designee.
- D. The Director or Director's designee may authorize a partial refund of a green building deposit when the applicant's request for exemption from this Chapter is granted by the Director, as specified in section 17.84.210.
- E. The Director or Director's designee shall not authorize the refund of any green building deposit, or any portion thereof, unless the original building permit applicant files a written request for refund and provides documentation satisfactory to the Director in support of the request.
- F. The Green Building Deposit is considered forfeited if City does not receive green building certification evidence demonstrating the compliance provisions of section 17.84.220 within a year after the building permit becomes inactive.

#### **17.84.302 Appeal**

Determinations of the Director on requests for exemption (as specified in Section 17.84.210) to this chapter are appealable to the Planning Commission pursuant to the procedures set forth in Sections Section 20.100.240 and 20.100.270 of the San Jose Municipal Code. A

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formal notice of appeal submittal of the planning development permit or amendment to the planning development permit is required.

**17.84.303 Enforcement**

- A. The enforcement of the achievement of green building standards contained in section 17.84.220 above shall be through the refund or forfeiture of the green building deposit paid by the applicant as specified in sections 17.84.220 & 17.84.302 above.
- B. The Director may not authorize a refund of any green building deposit unless green building standards are achieved as specified in section 17.84.220 or unless the Director issues an exemption specified in section 17.84.210.

PASSED FOR PUBLICATION of title this \_\_\_\_\_ day of \_\_\_\_\_, 2008, by the following vote:

AYES:

NOES:

ABSENT:

DISQUALIFIED:

DRAFT

\_\_\_\_\_  
CHUCK REED  
Mayor

ATTEST:

\_\_\_\_\_  
LEE PRICE, MMC  
City Clerk

**To: San Jose City Council**  
**From: Concerned Community Members**  
**Date: May 29, 2009**  
**Re: Independent Police Auditor Hiring Process**

**Dear Mayor and City Council,**

As the City once again attempts to hire the next San Jose Independent Police Auditor, it is vital that the hiring process be transparent and inclusive in order to bring community trust to this important office.

While we applaud the direction to re-start the hiring process, invite new applicants, and further involve the entire council in each decision-making point of the vetting progression, there still exist certain steps that can be taken that will allow for more public participation and consequently engender more community confidence in the integrity of the hire.

Having reviewed the last hiring process, the two major points of concern lay in the hiring firm and the role of the community panel.

***1) Need for a Proper Hiring Firm Experienced in this Field and Free of Conflict of Interest:***

Profile of Bob Murray and Associates:

**A) Lack of Experience in the Field of Law Enforcement Accountability –**

While the question of how the selection of the last hiring firm, Bob Murray and Associates, is still unclear, what we know about them is enough to discredit the entire IPA hiring process. From the proposal they submitted to the City, most of their professional experience is not on conducting searches for positions involving police oversight, but rather is focused on hiring for law enforcement positions. Indeed, in the past three years they have been contracted to lead the search for the Police Chief position for 28 cities, and in the firm's lifetime have conducted over 150 Police Chief searches. They have even led the search for the San Jose Police Chief. In their proposal, while they named numerous searches they led for law enforcement positions, they noted only one search for a law enforcement oversight position.

**B) Firm's Personnel is Inappropriate for a San Jose IPA Search -- Mr. Regan Williams, Vice President of Bob Murray and Associates, and the individual who**

supervised the vetting process in the last San Jose IPA search, is a former Sunnyvale Police Chief. According to the proposal submitted to the City. "Mr. Williams has over 30 years of experience in law enforcement... and served as a Deputy Sheriff for Alameda County, CA and Police Officer for Walnut Creek, CA." While such an extensive background in local law enforcement makes Mr. Williams well-suited to lead the search of law enforcement positions, it compromises his ability to run the search for the next San Jose IPA.

We recommend that Bob Murray and Associates be taken off the list of potential hiring firms contracted with the City, and that the selection process for the hiring firm be conducted at a public council meeting and with the involvement of the community panel. This is to ensure that such an important component of the search, the hiring firm (which plays a central role in distilling the applicant pool and the shaping of the hiring process), is selected in an open and inclusive manner.

***2) Need for Community Panel to have substantive input in the selection process.***

While the previous hiring process had a community panel, they were only involved in an extremely limited way, came in only in the end of the process, and had no decision-making power. In short, the opinion of the community panel did not necessarily have an impact on who was hired for the IPA position. The community panel should be fully integrated into the candidate selection process from the early stages of the hiring process, and should be able to report to the council of their findings in a public meeting. We also recommend that the number of community representatives be increased to better reflect the diverse San Jose community. Community organizations should be able to submit their name, and the name of their representative, for consideration to be on the panel to the Council.

We look forward to transparency in the hiring process and trust that it will be inclusive and provide us with an opportunity to be actively involved in order to bring community trust to the important work of the Office of the Independent Police Auditor.

Sincerely,

<u>Name</u>	<u>Identification Information Only</u>
<p>Aaron R. Resendez            Adrian Avila            Adrian Tepehua Vargas, MFA</p>	<p>Co-Chair BASTA Coalition            Silicon Valley De-Bug            Casa Vargas Productions, Artistic            Director/President</p>
<p>Aejaie Sellers            Alfredo Morales, Esq.            Alofa Talivaa            Al Chukes            Alfredo Villasenor</p>	<p>IPAAC Member            Concerned Community Member            IPAAC Member            Coalition of Concerned Citizens            San Jose Affiliate to the National Council of la            Raza, member of SJ La Raza Round Table</p>
<p>Amy Samelson            Aram James</p>	<p>Raging Grannies            Silicon Valley De-Bug</p>

Art Calderon	Business Owner
Betsy Wolf-Graves	Silicon Valley De-Bug
Brian Helmle	San Jose Copwatch
Cesar Juarez	Services, Immigrant Rights, and Education Network (SIREN)
Charisse Domingo	Silicon Valley De-Bug
Charlie Lostaunau	Chair, American GI Forum old #1
Charlotte Casey	President of the Board, San Jose Peace & Justice Center
Danny Garza	Member, Mexican American Political Association
Dennis Skaggs	IPAAC Member
Elisa Marina Alvarado, LCSW	IPAAC Member, Artistic Director, Teatro Vision, Member, Native Family Outreach and Engagement
Erika Navarro	SJSU Student
Eve Wood	CHAM
Fred Hirsch	Executive Board Member of Plumbers & Fitters Local 393, Delegate to SB Labor Council
Jean Melesaine	Silicon Valley De-Bug
Jeff Moore	IPAAC Member
Jesse Rizzo	Commander of the American G.I. Forum, East Valley Chapter
Jesse Villarreal	Concerned Community Member
Kathy Cordova	Concerned Community Member
Larry Estrada	IPAAC Member
Leanne Dezzani-Katano	Community Activist
Leonard Washington	Coalition of Concerned Citizens
Lessie James	Coalition of Concerned Citizens
Linda Colar	IPAAC Member
Martha Campos	Comite Cesar Chavez
Moses Aviles	Silicon Valley De-Bug
Paul Meyering	Attorney
Pete Carrillo	Concerned Community Member
Raj Jayadev	Silicon Valley De-Bug
Raul Colunga	Concerned Community Member
Richard Hobbs	Interim Executive Director, Services, Immigrant Rights and Education Network
Richard Konda	Executive Director, Asian Law Alliance
Rick Callender	IPAAC Member
Rosario Vital	Community Member
Ruben M De la Rosa	Americanos United
Sandy Perry	CHAM
San Jose Peace and Justice Center	
Socorro Reyes-McCord	IPAAC Member; Member of the The Interfaith Council on Religion, Race Economic and Social Justice, former member of City of SJ Human Rights Commission and Senior Commission
Sofia Mendoza	IPAAC Member, Member of Community Child Care Council of Santa Clara County
Sundust Teocuahtli Martinez	Indigenous Peoples Council Native Voice, TV Executive, IPAAC Member

Terry Christensen  
Tony Alexander  
Walter Wilson  
Wiggy Sivertsen  
William Lyas  
Yolanda Reynolds

Professor, SJSU  
IPAAC Member  
African-American Center  
IPAAC Member  
Silicon Valley De-Bug  
Concerned Community Member